REMARKS

This communication responds to the Office Action mailed on October 5, 2007. Claims 1, 12, 18 and 24 are amended, claims 11 and 17 are canceled, and no claims are added. As a result, claims 1-3, 6-10, 12-16, and 18-28 are now pending in this application.

§*103 Rejection of the Claims*

Claims 1, 2, 6, 7, 10-12, 14-19, 22 and 24 were rejected under 35 USC § 103(a) as being unpatentable over Kawanabe (U.S. 7,054,397) in view of Fattouche et al. (U.S. 6,266,014, hereinafter "Fattouche"). Claims 3, 8, 9, 21 and 25 were also rejected under 35 USC § 103(a) as being unpatentable over Kawanabe and Fattouche and further in view of Li et al. (U.S. 6,639,551, hereinafter "Li"). Claim 13 was also rejected under 35 USC § 103(a) as being unpatentable over Kawanabe and Fattouche and further in view of Fernandes (U.S. 5,490,134). Claim 20 was also rejected under 35 USC § 103(a) as being unpatentable over Kawanabe and further in view of Linet et al. (U.S. 6,175,327, hereinafter "Linet"). Claims 23, 26 and 28 were also rejected under 35 USC § 103(a) as being unpatentable over Kawanabe and Fattouche and Li and further in view of Casabona et al. (U.S. 5,782,540, hereinafter "Casabona"). Claim 27 was also rejected under 35 USC § 103(a) as being unpatentable over Kawanabe and Fattouche and Li and Casabona and further in view of Fernandes. Since a *prima facie* case of obviousness has not been established as required by M.P.E.P. § 2142, the Applicant respectfully traverses this rejection under 35 USC § 103(a).

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988). The M.P.E.P. contains explicit direction to the Examiner in accordance with the *In re Fine* court:

> In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d (BNA) 1438 (Fed. Cir. 1991)).

The requirement of a suggestion or motivation to combine references in a *prima facie* case of obviousness is emphasized in the Federal Circuit opinion, *In re Sang Su Lee*, 277 F.3d 1338; 61 U.S.P.Q.2D 1430 (Fed. Cir. 2002), which indicates that the motivation must be supported by evidence in the record.

The independent claims 1, 12, 18 and 24 have been amended to incorporate variations of the limitations in previously pending claims 11 and 17, which are now canceled. It is asserted in the Office Action that "**Kawanabe discloses the selected frequency is approximately zero cycles-per-second**", as originally recited in Applicant's canceled claims 11 and 17. However, a close reading of Kawanabe reveals that such is not the case.

Kawanabe describes "In FIG. 6A, the frequency spectrums (a, b, . . . c) of the receiving signals (109-1, 2, . . . , n) substantially and continuously distributed on a frequency axis without overlapping to each other on the basis of a reference frequency (f_0)." See Kawanabe Col. 8, lines 27-31. Kawanabe also describes "In FIG. 6B, the frequency spectrums (a, b, . . . c) of the receiving signals (109-1, 2, . . . , n) substantially and continuously distributed on a frequency axis without overlapping to each other based upon the reference frequency (f_0)." See Kawanabe Col. 9, lines 4-9. Also referring to Figures 6A and 6B of Kawanabe, relied upon by the Office Action, it can be seen that Kawanabe does not disclose that **a composite signal is centered at a selected frequency of approximately zero cycles-per-second**, as originally claimed in Applicant's canceled claims 11 and 17 and now claimed in amended independent claims 1, 12, 18 and 24.

No combination of Fernandes, Li, Fernandes, Linet, or Casabona remedies this deficiency of Kawanabe. Thus, no combination of the cited references can teach the claimed element that **a composite signal is centered at a selected frequency of approximately zero cycles-per-second,** as claimed in amended independent claims 1, 12, 18 and 24. Thus, amended independent claims 1, 12, 18, and 24 are nonobvious.

All dependent claims are also nonobvious, since any claim depending from a nonobvious independent claim is also nonobvious. See M.P.E.P. § 2143.03. It is therefore respectfully requested that the rejections of claims 1-3, 6-10, 12-16, and 18-28 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

RESERVATION OF RIGHTS

In the interest of clarity and brevity, Applicant may not have addressed every assertion made in the Office Action. Applicant's silence regarding any such assertion does not constitute any admission or acquiescence. Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicant does not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is based upon the Examiner's personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, Applicant timely objects to such reliance on Official Notice, and reserves all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. Applicant reserves all rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney ((210) 308-5677) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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